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Alana Fredericks Alana Fredericks 1/24/02
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CASE 1627D

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF

COOKE, ET AL.

S.N. DIVISIONAL OF 08/945,722

FILED: CONCURRENTLY HEREWITH

FOR: IMPROVEMENT IN OR RELATING TO

PLANT STARCH COMPOSITIONS

Group Art Unit: 1623

Examiner: E. WHITE

Commissioner of Patents and Trademarks

Washington, D.C. 20231

PRELIMINARY AMENDMENT

Sir:

In the above-identified application, Applicants respectfully request the following preliminary amendment be entered and the claims considered in light thereof.

IN THE SPECIFICATION

On page 1, on a new line after the title line, add --This application is a divisional application of U.S. Serial No. 08/945,722.—

Before the claims, insert --We claim:--.

Delete the hard copy of the sequence listing and add the new sequence listing submitted herewith.

A marked up copy of the amended paragraphs is presented in Appendix C.

10056454.012402

IN THE CLAIMS

Cancel claims 1-26, 52, 64-66.

Amend claims 28-35, 37-51, 53-63 and 68 to read:

28. The nucleotide sequence according to claim 27, encoding a polypeptide comprising substantially the amino acid sequence of residues 49 to 882 of the sequence shown in Figure 5.

29. The nucleotide sequence according to claim 27 or 28, comprising substantially the sequence of nucleotides 289 to 2790 of the sequence shown in Figure 5, or a functional equivalent thereof.

30. The nucleotide sequence according to claim 29, further comprising the sequence of nucleotides 145 to 288 of the sequence shown in Figure 5, or a functional equivalent thereof.

31. The nucleotide sequence according to claim 27, comprising the sequence of nucleotides 228 to 2855 of the sequence labelled psbe2con.seq in Figure 8, or a functional equivalent thereof.

32. The nucleotide sequence according to claim 27, comprising the sequence of nucleotides 57 to 2564 of the sequence labelled as psbe2con.seq in Figure 12, or a functional equivalent thereof.

33. The nucleotide sequence according to any one of claims 27 to 32, comprising an in-frame ATG start codon, and optionally including a 5' and/or a 3' untranslated region.

34. The nucleotide sequence according to claim 27, comprising the sequence of nucleotides 45 to 3200 of the sequence labelled as psbe2con.seq in Figure 8, or a functional equivalent thereof.

35. A nucleic acid construct comprising a sequence in accordance claim 27.

37. A host cell into which has been introduced a sequence in accordance with claim 27.

38. An effective portion of a class A SBE polypeptide obtainable from potato plants and encoded by a nucleotide sequence in accordance with claim 27.

39. The polypeptide according to claim 38, comprising substantially the sequence of amino acids 49 to 882 of the sequence shown in Figure 5, or a functional equivalent thereof.

40. The polypeptide according to claim 38, comprising the sequence of amino acids 1 to 48 of the sequence shown in Figure 5.

41. The polypeptide in accordance with claim 38 in substantial isolation from other plant-derived constituents.

42. A method of altering the characteristics of a plant, comprising introducing into the plant a portion of a nucleotide sequence in accordance with claim 27, operably linked to a

suitable promoter active in the plant, so as to affect the expression of a gene present in the plant.

43. ⁴² The method according to claim 42, wherein the nucleotide sequence is operably linked in the anti-sense orientation to a suitable promoter active in the plant.

44. ⁴³ The method according to claim 42, wherein the introduced sequence comprises at least one region selected from the group consisting of a 5' untranslated region, a 3' untranslated region, and a coding region of the potato SBE class A starch branching enzyme operably linked in the sense orientation to a promoter active in the plant, so as to cause sense suppression of an enzyme naturally expressed in the plant.

45. ⁴⁴ The method according to claim 42, further comprising introducing into the plant one or more further sequences.

46. ⁴⁵ The method according to claim 45, wherein one or more of the further sequences are operably linked in the anti-sense orientation to a suitable promoter active in the plant.

47. ⁴⁶ The method according to claim 45, wherein the further sequence comprises a portion of a class B SBE nucleotide sequence.

48. ⁴⁷ The method according claim 42 or 47, effective in altering the starch composition of a plant.

49. ⁴⁸ A plant or plant cell having characteristics altered by the method of claim 42 or 47, or the progeny of such a plant, or part of such a plant.

50. ⁴⁹ The plant according to claim 49, selected from one of the following: potato, pea, tomato, maize, wheat, rice, barley, sweet potato, and cassava.

51. ⁵⁰ A tuber or other storage organ from a plant according to claim 49.

52. ⁵¹ The plant according to claim 49, containing starch which, as extracted from the plant by wet milling at ambient temperature, has an elevated viscosity onset temperature as judged by viscoamylograph conducted according to the protocol defined in claim 7, compared to starch extracted from a similar, but unaltered, plant.

53. ⁵² The plant according to claim 53, wherein the viscosity onset temperature is elevated by an amount in the range of 10 to 25°C.

54. ⁵³ The plant according to claim 49, containing starch which, as extracted from the plant by wet milling at ambient temperature, has a decreased peak viscosity as judged by viscoamylograph conducted according to the protocol defined in claim 7, compared to starch extracted from a similar, but unaltered, plant.

55. ⁵⁴ The plant according to claim 55, wherein the peak viscosity is decreased by an amount in the range of 240 to 700 SNU.

57. The plant according to claim 49, containing starch which, as extracted from the plant by wet milling at ambient temperature, has an increased pasting viscosity as judged by viscoamylograph conducted according to the protocol defined in claim 7, compared to starch extracted from a similar, but unaltered, plant.

58. The plant according to claim 57, wherein the pasting viscosity is increased by an amount in the range of 37 to 260 SNUs.

59. The plant according to claim 49, containing starch which, as extracted from the plant by wet milling at ambient temperature, has an increased set-back viscosity as judged by viscoamylograph conducted according to the protocol defined in claim 7, compared to starch extracted from a similar, but unaltered, plant.

60. The plant according to claim 59, wherein the set-back viscosity is increased by an amount in the range of 224 to 313 SNUs.

61. The plant according to claim 49, containing starch which, as extracted from the plant by wet milling at ambient temperature, has a decreased set-back viscosity as judged by viscoamylograph conducted according to the protocol defined in claim 7, compared to starch extracted from a similar, but unaltered, plant.

62. The plant according to claim 49, containing starch which, as extracted from the plant by wet milling at ambient temperature, has an elevated apparent amylose content as judged by iodometric assay according to the method of Morrison & Laignelet, compared to starch extracted from a similar, but unaltered, plant.

63. The plant according to claim 49, containing starch which, as extracted from the plant, has a phosphorus content in excess of 200mg/100grams dry weight starch.

64. A potato plant or part thereof which, in its wild type possesses an effective SBE A gene, but which plant has been altered such that there is no effective expression of an SBE A polypeptide within the cells of at least part of the plant, wherein the alteration is effected by a method according to claim 42 or 47.

Add new claims 69-74 to read:

-- 69. A foodstuff comprising the starch of claim 1.

70. The foodstuff of claim 69, wherein the starch provides a film, barrier, or coating.

71. The foodstuff of claim 69, wherein the starch is a gelling agent.

72. A composition comprising the starch of claim 1, wherein the composition is selected from the group consisting of a biodegradable product, a packaging material, a glass fiber, and a textile.

73.67 The nucleotide sequence of claim 33, further comprising a 5' and/or a 3' untranslated region.

68.74. A food stuff comprising a tuber or other storage organ according to claim 51. --

10056454.012402

STATUS OF THE CLAIMS

Claims 1-68 were filed as a PCT application.

Claims 1-26, 52, 64-66 have been cancelled. A marked up copy of these claims is presented in Appendix A.

Claims 28-35, 37-51, 53-63 and 68 have been amended. A marked up copy of these claims is presented in Appendix A.

Claims 69-74 have been added. A marked up copy of these claims is presented in Appendix A.

Claims 27-51, 53-63, and 67-74 are presented for consideration. A clean copy of these claims is presented in Appendix B.

REMARKS

The specification has been amended to show the priority claim from the divisional application and by adding the words "We claim" before the claim in conformance with US patent practice.

The specification has been amended so that the sequence listing conforms to US patent practice. A copy of the amended sequence listing is enclosed herewith to facilitate examination.

The claims have been amended to remove multiple dependencies and conform to US patent practice. Added claims 69-74 have descriptive basis in original claims 23-26, 33 and 52.

In view of the foregoing, Applicant respectfully requests early action on this Application.

Respectfully submitted,



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Appendix A

(marked up copy of amendments to claims)

1. (deleted) Starch extracted from a potato plant and having an amylose content of at least 35%, as judged by the iodometric assay method of Morrison & Laignelet (1983 J. Cereal Science 1, 9-20).

2. (deleted) Starch according to claim 1, having an amylose content of at least 37%, as judged by the method defined in claim 1.

3. (deleted) Starch according to claim 1, having an amylose content of at least 40%, as judged by the method defined in claim 1.

4. (deleted) Starch according to claim 1, having an amylose content of at least 50%, as judged by the method defined in claim 1.

5. (deleted) Starch according to claim 1, having an amylose content of at least 66%, as judged by the method defined in claim 1.

6. (deleted) Starch according to any one of claims 1-5, having an amylose content of 35 - 66%, as judged by the method defined in claim 1.

7. (deleted) Starch which as extracted from a potato plant by wet milling at ambient temperature has a viscosity onset temperature in the range 70 - 95°C, as judged by viscoamylograph of a 10% w/w aqueous suspension thereof, performed at atmospheric pressure using the Newport Scientific Rapid Visco Analyser 3C with a heating profile of holding at 50°C for 2 minutes, heating from 50 to 95°C at a rate of 1.5°C per minute, holding at 95°C for 15 minutes, cooling from 95 to 50°C at a rate of 1.5°C per minute, and then holding at 50°C for 15 minutes.

8. (deleted) Starch which as extracted from a potato plant by wet milling at ambient temperature has peak viscosity in the range 500 - 12 stirring number units (SNUs), as judged by viscoamylograph conducted according to the protocol defined in claim 7.

9. (deleted) Starch which as extracted from a potato plant by wet milling at ambient temperature has a pasting viscosity in the range 214 - 434 SNUs, as judged by viscoamylograph conducted according to the protocol defined in claim 7.

10. (deleted) Starch which as extracted from a potato plant by wet milling at ambient temperature has a set-back viscosity in the range 450 - 618 SNUs, as judged by viscoamylograph conducted according to the protocol defined in claim 7.

11. (deleted) Starch which as extracted from a potato plant by wet milling at ambient temperature has a set-back viscosity in the range 14 - 192 SNUs, as judged by

viscoamylograph conducted according to the protocol defined in claim 7.

12. (deleted) Starch which as extracted from a potato plant by wet milling at ambient temperature has a peak viscosity in the range 200 - 500 SNUs and a set-back viscosity in the range 275-618 SNUs as judged by viscoamylograph according to the protocol defined in claim 7.

13. (deleted) Starch which as extracted from a potato plant by wet milling at ambient temperature has a viscosity which does not decrease between the start of the heating phase (step 2) and the start of the final holding phase (step 5) and has a set-back viscosity of 303 SNUs or less as judged by viscoamylograph according to the protocol defined in claim 7.

14. (deleted) Starch which as extracted from a potato plant by wet milling at ambient temperature displays no significant increase in viscosity as judged by viscoamylograph conducted according to the protocol defined in claim 7.

15. (deleted) Starch which as extracted from a potato plant by wet milling at ambient temperature, is in accordance with claim 7 and in accordance with any one of claims 8 to 14.

16. (deleted) Starch according to any one of claims 7 to 15, having an amylose content in the range 35 - 66%, as judged by the method of Morrison & Laignelet defined in claim 1.

17. (deleted) Starch which as extracted from a potato plant, has a phosphorus content in excess of 200mg/100grams dry weight starch.

18. (deleted) Starch according to claim 17, having a phosphorus content in the range 200 - 240mg/100grams dry weight starch.

19. (deleted) Starch according to claim 17 or 18, further in accordance with any one of claims 1 to 16.

20. (deleted) Starch prepared by physical, chemical and/or enzymatic treatment of a starch initially having properties in accordance with any one of claims 1-19.

21. (deleted) Starch according to claim 20, being resistant starch prepared by physical, chemical and/or enzymatic treatment of a starch initially having properties in accordance with any one of claims 1-19.

22. (deleted) Starch according to claim 21, comprising in excess of 5% total dietary fibre, as determined according to the method of Prosky *et al.*, (1985 J. Assoc. Off. Anal. Chem. 68, 677).

23. (deleted) Use of starch according to any one of claims 1-22 in the preparation or processing of a foodstuff.

24. (deleted) Use of starch according to claim 23, wherein the starch is used to provide a film, barrier, coating or as a gelling agent.

25. (deleted) Use of starch according to claim 23, to prepare resistant starch

compositions.

26. (deleted) Use of starch according to any one of claims 1-22 in the preparation or processing of corrugating adhesives, biodegradable products, packaging, glass fibers and textiles.

28. (amended once) The [A] nucleotide sequence according to claim 27, encoding a polypeptide comprising substantially the amino acid sequence of residues 49 to 882 of the sequence shown in Figure 5.

29. (amended once) The [A] nucleotide sequence according to claim 27 or 28, comprising substantially the sequence of nucleotides 289 to 2790 of the sequence shown in Figure 5, or a functional equivalent thereof.

30. (amended once) The [A] nucleotide sequence according to claim 29, further comprising the sequence of nucleotides 145 to 288 of the sequence shown in Figure 5, or a functional equivalent thereof.

31. (amended once) The [A] nucleotide sequence according to claim 27, comprising the sequence of nucleotides 228 to 2855 of the sequence labelled psbe2con.seq in Figure 8, or a functional equivalent thereof.

32. (amended once) The [A] nucleotide sequence according to claim 27, comprising the sequence of nucleotides 57 to 2564 of the sequence labelled as psbe2con.seq in Figure 12, or a functional equivalent thereof.

33. (amended once) The [A] nucleotide sequence according to claim 27 [any one of claims 27 to 32], comprising an in-frame ATG start codon, and optionally including a 5' and/or a 3' untranslated region.

34. (amended once) The [A] nucleotide sequence according to claim 27, comprising the sequence of nucleotides 45 to 3200 of the sequence labelled as psbe2con.seq in Figure 8, or a functional equivalent thereof.

35. (amended once) A nucleic acid construct comprising a sequence in accordance with claim 27 [any one of claims 27 to 34].

37. (amended once) A host cell into which has been introduced a sequence in accordance with claim 27 [any one of claims 27 to 36].

38. (amended once) An effective portion of a class A SBE polypeptide obtainable from potato plants and encoded by a nucleotide sequence in accordance with claim 27 [any one of claims 27 to 36].

39. (amended once) The [A] polypeptide according to claim 38, comprising substantially the sequence of amino acids 49 to 882 of the sequence shown in Figure 5, or a functional equivalent thereof.

40. (amended once) The [A] polypeptide according to claim 38 [or 39], comprising the sequence of amino acids 1 to 48 of the sequence shown in Figure 5.

41. (amended once) The [A] polypeptide in accordance with claim 38 [any one of claims 38, 39 or 40] in substantial isolation from other plant-derived constituents.

42. (amended once) A method of altering the characteristics of a plant, comprising introducing into the plant a portion of a nucleotide sequence in accordance with claim 27 [any one of claims 27 to 36], operably linked to a suitable promoter active in the plant, so as to affect the expression of a gene present in the plant.

43. (amended once) The [A] method according to claim 42, wherein the nucleotide sequence is operably linked in the anti-sense orientation to a suitable promoter active in the plant.

44. (amended once) The [A] method according to claim 42, wherein the introduced sequence comprises at least one region selected from the group consisting of a 5' untranslated region, a 3' untranslated region, and a coding region of the potato SBE class A starch branching enzyme [or more of the following] operably linked in the sense orientation to a promoter active in the plant, so as to cause sense suppression of an enzyme naturally expressed in the plant: a 5' untranslated region, a 3' untranslated region, or a coding region of the potato SBE class A starch branching enzyme].

45. (amended once) The [A] method according to claim 42 [any one of claims 42, 43 or 44], further comprising introducing into the plant one or more further sequences.

46. (amended once) The [A] method according to claim 45, wherein one or more of the further sequences are operably linked in the anti-sense orientation to a suitable promoter active in the plant.

47. (amended once) The [A] method according to claim 45 [or 46], wherein the further sequence comprises a portion of a class B SBE nucleotide sequence.

48. (amended once) The [A] method according to claim 42 or 47 [any one of claims 42 to 47], effective in altering the starch composition of a plant.

49. (amended once) A plant or plant cell having characteristics altered by the method of Claim 42 or 47 [any one of claims 42 to 48], or the progeny of such a plant, or part of such a plant.

50. (amended once) The [A] plant according to claim 49, selected from one of the following: potato, pea, tomato, maize, wheat, rice, barley, sweet potato, and cassava.

51. (amended once) A tuber or other storage organ from a plant according to claim 49 [or 50].

52. (deleted) Use of a tuber or other storage organ according to claim 51, in the

preparation and/or processing of a foodstuff.

53. (amended once) The [A] plant according to claim 49 [or 50], containing starch which, as extracted from the plant by wet milling at ambient temperature, has an elevated viscosity onset temperature as judged by viscoamylograph conducted according to the protocol defined in claim 7, compared to starch extracted from a similar, but unaltered, plant.

54. (amended once) The [A] plant according to claim 53, wherein the viscosity onset temperature is elevated by an amount in the range of 10 to 25°C.

55. (amended once) The [A] plant according to claim 49 [or 50], containing starch which, as extracted from the plant by wet milling at ambient temperature, has a decreased peak viscosity as judged by viscoamylograph conducted according to the protocol defined in claim 7, compared to starch extracted from a similar, but unaltered, plant.

56. (amended once) The [A] plant according to claim 55, wherein the peak viscosity is decreased by an amount in the range of 240 to 700 SNU.

57. (amended once) The [A] plant according to claim 49 [or 50], containing starch which, as extracted from the plant by wet milling at ambient temperature, has an increased pasting viscosity as judged by viscoamylograph conducted according to the protocol defined in claim 7, compared to starch extracted from a similar, but unaltered, plant.

58. (amended once) The [A] plant according to claim 57, wherein the pasting viscosity is increased by an amount in the range of 37 to 260 SNU.

59. (amended once) The [A] plant according to claim 49 [or 50], containing starch which, as extracted from the plant by wet milling at ambient temperature, has an increased set-back viscosity as judged by viscoamylograph conducted according to the protocol defined in claim 7, compared to starch extracted from a similar, but unaltered, plant.

60. (amended once) The [A] plant according to claim 59, wherein the set-back viscosity is increased by an amount in the range of 224 to 313 SNU.

61. (amended once) The [A] plant according to claim 49 [or 50], containing starch which, as extracted from the plant by wet milling at ambient temperature, has a decreased set-back viscosity as judged by viscoamylograph conducted according to the protocol defined in claim 7, compared to starch extracted from a similar, but unaltered, plant.

62. (amended once) The [A] plant according to claim 49 [or 50], containing starch which, as extracted from the plant by wet milling at ambient temperature, has an elevated apparent amylose content as judged by iodometric assay according to the method of Morrison & Laignelet, compared to starch extracted from a similar, but unaltered, plant.

63. (amended once) The [A] plant according to claim 49 [or 50], containing starch which, as extracted from the plant, has a phosphorus content in excess of 200mg/100grams dry weight

starch.

64. (deleted) Starch obtainable from a plant according to any one of claims 49, 50 or 53 - 63.

65. (deleted) Starch according to claim 64 and further in accordance with any one of claims 1 - 22.

66. (deleted) A method of modifying starch *in vitro*, comprising treating starch under suitable conditions with an effective amount of a polypeptide in accordance with any one of claims 38 to 41.

68. (amended once) A potato plant or part thereof which, in its wild type possesses an effective SBA A gene, but which plant has been altered such that there is no effective expression of an SBE A polypeptide within the cells of at least part of the plant [according to claim 67] wherein the alteration is effected by a method according to claim 42 or 47 [any one of claims 42-48].

69. (added) A foodstuff comprising the starch of claim 1.

70. (added) The foodstuff of claim 69, wherein the starch provides a film, barrier, or coating.

71. (added) The foodstuff of claim 69, wherein the starch is a gelling agent.

72. (added) A composition comprising the starch of claim 1, wherein the composition is selected from the group consisting of a biodegradable product, a packaging material, a glass fiber, and a textile.

73. (added) The nucleotide sequence of claim 33, further comprising a 5' and/or a 3' untranslated region.

74. (added) A food stuff comprising a tuber or other storage organ according to claim 51.

Appendix B

(clean copy of pending claims)

27. A nucleotide sequence encoding an effective portion of a class A starch branching enzyme (SBE) obtainable from potato plants.

28. The nucleotide sequence according to claim 27, encoding a polypeptide comprising substantially the amino acid sequence of residues 49 to 882 of the sequence shown in Figure 5.

29. The nucleotide sequence according to claim 27 or 28, comprising substantially the sequence of nucleotides 289 to 2790 of the sequence shown in Figure 5, or a functional equivalent thereof.

30. The nucleotide sequence according to claim 29, further comprising the sequence of nucleotides 145 to 288 of the sequence shown in Figure 5, or a functional equivalent thereof.

31. The nucleotide sequence according to claim 27, comprising the sequence of nucleotides 228 to 2855 of the sequence labelled psbe2con.seq in Figure 8, or a functional equivalent thereof.

32. The nucleotide sequence according to claim 27, comprising the sequence of nucleotides 57 to 2564 of the sequence labelled as psbe2con.seq in Figure 12, or a functional equivalent thereof.

33. The nucleotide sequence according to any one of claims 27 to 32, comprising an in-frame ATG start codon, and optionally including a 5' and/or a 3' untranslated region.

34. The nucleotide sequence according to claim 27, comprising the sequence of nucleotides 45 to 3200 of the sequence labelled as psbe2con.seq in Figure 8, or a functional equivalent thereof.

35. A nucleic acid construct comprising a sequence in accordance claim 27.

36. An expression vector comprising a nucleic acid construct according to claim 35.

37. A host cell into which has been introduced a sequence in accordance with claim 27.

38. An effective portion of a class A SBE polypeptide obtainable from potato plants and encoded by a nucleotide sequence in accordance with claim 27.

39. The polypeptide according to claim 38, comprising substantially the sequence of amino acids 49 to 882 of the sequence shown in Figure 5, or a functional equivalent thereof.

40. The polypeptide according to claim 38, comprising the sequence of amino acids 1 to 48 of the sequence shown in Figure 5.

41. The polypeptide in accordance with claim 38 in substantial isolation from other plant-derived constituents.

42. A method of altering the characteristics of a plant, comprising introducing into the plant a portion of a nucleotide sequence in accordance with claim 27, operably linked to a suitable promoter active in the plant, so as to affect the expression of a gene present in the plant.

43. The method according to claim 42, wherein the nucleotide sequence is operably linked in the anti-sense orientation to a suitable promoter active in the plant.

44. The method according to claim 42, wherein the introduced sequence comprises at least one region selected from the group consisting of a 5' untranslated region, a 3' untranslated region, and a coding region of the potato SBE class A starch branching enzyme operably linked in the sense orientation to a promoter active in the plant, so as to cause sense suppression of an enzyme naturally expressed in the plant.

45. The method according to claim 42, further comprising introducing into the plant one or more further sequences.

46. The method according to claim 45, wherein one or more of the further sequences are operably linked in the anti-sense orientation to a suitable promoter active in the plant.

47. The method according to claim 45, wherein the further sequence comprises a portion of a class B SBE nucleotide sequence.

48. The method according claim 42 or 47, effective in altering the starch composition of a plant.

49. A plant or plant cell having characteristics altered by the method of claim 42 or 47, or the progeny of such a plant, or part of such a plant.

50. The plant according to claim 49, selected from one of the following: potato, pea, tomato, maize, wheat, rice, barley, sweet potato, and cassava.

51. A tuber or other storage organ from a plant according to claim 49.

53. The plant according to claim 49, containing starch which, as extracted from the plant by wet milling at ambient temperature, has an elevated viscosity onset temperature as judged by viscoamylograph conducted according to the protocol defined in claim 7, compared to starch extracted from a similar, but unaltered, plant.

54. The plant according to claim 53, wherein the viscosity onset temperature is elevated by an amount in the range of 10 to 25°C.

55. The plant according to claim 49, containing starch which, as extracted from the plant by wet milling at ambient temperature, has a decreased peak viscosity as judged by

viscoamylograph conducted according to the protocol defined in claim 7, compared to starch extracted from a similar, but unaltered, plant.

56. The plant according to claim 55, wherein the peak viscosity is decreased by an amount in the range of 240 to 700 SNUs.

57. The plant according to claim 49, containing starch which, as extracted from the plant by wet milling at ambient temperature, has an increased pasting viscosity as judged by viscoamylograph conducted according to the protocol defined in claim 7, compared to starch extracted from a similar, but unaltered, plant.

58. The plant according to claim 57, wherein the pasting viscosity is increased by an amount in the range of 37 to 260 SNUs.

59. The plant according to claim 49, containing starch which, as extracted from the plant by wet milling at ambient temperature, has an increased set-back viscosity as judged by viscoamylograph conducted according to the protocol defined in claim 7, compared to starch extracted from a similar, but unaltered, plant.

60. The plant according to claim 59, wherein the set-back viscosity is increased by an amount in the range of 224 to 313 SNUs.

61. The plant according to claim 49, containing starch which, as extracted from the plant by wet milling at ambient temperature, has a decreased set-back viscosity as judged by viscoamylograph conducted according to the protocol defined in claim 7, compared to starch extracted from a similar, but unaltered, plant.

62. The plant according to claim 49, containing starch which, as extracted from the plant by wet milling at ambient temperature, has an elevated apparent amylose content as judged by iodometric assay according to the method of Morrison & Laignelet, compared to starch extracted from a similar, but unaltered, plant.

63. The plant according to claim 49, containing starch which, as extracted from the plant, has a phosphorus content in excess of 200mg/100grams dry weight starch.

67. A potato plant or part thereof which, in its wild type possesses an effective SBE A gene, but which plant has been altered such that there is no effective expression of an SBE A polypeptide within the cells of at least part of the plant.

68. A potato plant or part thereof which, in its wild type possesses an effective SBE A gene, but which plant has been altered such that there is no effective expression of an SBE A polypeptide within the cells of at least part of the plant, wherein the alteration is effected by a method according to claim 42 or 47.

69. A foodstuff comprising the starch of claim 1.

70. The foodstuff of claim 69, wherein the starch provides a film, barrier, or coating.

71. The foodstuff of claim 69, wherein the starch is a gelling agent.

72. A composition comprising the starch of claim 1, wherein the composition is selected from the group consisting of a biodegradable product, a packaging material, a glass fiber, and a textile.

73. The nucleotide sequence of claim 33, further comprising a 5' and/or a 3' untranslated region.

74. A food stuff comprising a tuber or other storage organ according to claim 51.

Appendix C

(marked up copy of amendments to specification)

On page 1, on a new line after the title line,

This application is a divisional application of U.S. Serial No. 08/945,722.

Before the claims,

We claim: